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# HEAT HAZARDS IN AGRICULTURE



A GUIDE  
FOR EMPLOYERS  
TO CARRY OUT  
TAILGATE TRAINING  
FOR WORKERS

WORKER OCCUPATIONAL SAFETY AND HEALTH TRAINING AND EDUCATION PROGRAM  
CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS  
COMMISSION ON HEALTH AND SAFETY AND WORKERS' COMPENSATION



# Heat Hazards in Agriculture



## **A GUIDE FOR EMPLOYERS TO CARRY OUT TAILGATE TRAINING FOR WORKERS**

Labor Occupational Health Program  
University of California, Berkeley

Commission on Health and Safety and Workers' Compensation  
California Department of Industrial Relations

2008

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**For More Information:**

Labor Occupational Health Program  
University of California, Berkeley  
2223 Fulton Street, 4th Floor  
Berkeley, CA 94720-5120  
(510) 642-5507  
www.lohp.org

Users are encouraged to photocopy or adapt this information as needed for not-for-profit training purposes. Please acknowledge LOHP for producing the materials.

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*Heat Advisory* on page 29 was produced by Cal/OSHA.

Written by Suzanne Teran, LOHP.

Edited by Gene Darling, LOHP.

Graphic Design by Kate Oliver, LOHP.

Translation to Spanish by Lisa de Ávila.

Illustrations by Mary Ann Zapalac.

Photos: Corbis and Howard Rosenberg.

**Technical Reviewers:**

Amalia Neidhardt, Cal/OSHA  
Janice Prudhomme, HESIS, California Department of Public Health  
Joan Cuadra, Proteus, Inc.  
Anne Katten, California Rural Legal Assistance  
Silas Shawver, California Rural Legal Assistance  
Howard Rosenberg, Department of Agriculture and Resource Economics, UC Berkeley  
Deogracia Cornelio, LOSH, UCLA

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# Introduction

The past few summers have shown that the risk of heat illness from high temperatures is one of the most serious challenges to the safety and health of farmworkers.

This training guide will help you plan how to prevent heat illness among your crew and provide training to your workers. The training guide is available in English and Spanish, and includes the following tools for the supervisor or crew leader to use:

- A checklist to inspect the worksite and think about heat hazards before the training is held. *(page 33)*
- Complete instructions for teaching workers about heat hazards. *(pages 9–23)*
- Additional resources:
  - A daily checklist to make sure all appropriate precautions are in place each work day. *(page 31)*
  - A Cal/OSHA factsheet that reviews some of the key information about heat illness, to read as needed. *(page 29)*
  - An easy-to-read factsheet that you can copy and distribute to workers. *(page 37)*

The training is designed to be:

- **Short** — it’s 45 minutes long, but if you’d prefer you can carry it out in three 15-minute sessions as tailgate meetings before the work shift or during “shade breaks.” Workers must get all the information before starting work and again during a heat wave.
- **Participatory** — for workers to be able to ask questions and have some discussion, which increases the likelihood they will remember the information.
- **Easy to follow** — so a supervisor or crew leader can lead the training.
- **In compliance** — with the requirements laid out in the Cal/OSHA heat stress standard, General Industry Safety Order (GISO) 3395.

## Why is it important to prevent heat illness?

- Heat illness can be a matter of life and death. Many workers have died during recent summer heat waves.
- Those who survive heat illness can still develop serious conditions, including heart, liver, kidney, and muscle damage, nervous system problems, and blood disorders.
- Having a serious injury or death occur at work is upsetting to everyone at a worksite.
- Workers suffering from heat stress are at greater risk for accidents, since they are less alert and can be confused.
- Workers' compensation costs could increase.
- It's the law — California's standard, "Heat Illness Prevention" (GISO 3395), requires that employers develop procedures to prevent heat illness.



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# The Tailgate Training

Tailgate training can be a very efficient way to reach workers with health and safety information. Like all training, making sure you are effective in communicating the information takes preparation and a real desire to involve your crew in health and safety. In this guide, you will find some tips for trainers that can help encourage discussion and enable workers to be active players in keeping the job safe.

Follow these four steps to prepare for and carry out the tailgate training:

1. Complete the *Heat Hazards Safety Checklist* on page 33. You can use this checklist to help plan your prevention program. By completing the checklist before the training, you will be able to make sure your worksite is in compliance with the regulation. You also will be able to think about how to make the training more specific to your own job site.
2. Read and become familiar with the *Tailgate Training Guide* (beginning on page 9).
3. Hold the training.
4. Document and evaluate. To conclude the training, you may want to ask the crew for feedback. Did they understand the material? Was it well presented? Was it helpful and relevant?

Remember to have each crew member sign a sign-in sheet as this allows you to keep good records of who has been trained. Each worker needs to be trained *before* they can work in a hot environment.

If workers have questions about other hazards, or there are some follow-up items from this training, write them down and make a plan for addressing them as soon as you can.



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# Tailgate Training Guide: Heat Hazards in Agriculture

## How to use this guide:

The Training Guide is written so that you can easily follow it. It is divided into three 15-minute sessions:

**Session 1:** Health effects of heat

**Session 2:** How to respond to symptoms

**Session 3:** Preventing heat illness

To provide this training, you will be leading a discussion in which you ask questions and encourage participation.

## How the guide is formatted:

The training guide will lead you through the training. It includes instructions for you as the trainer as well as questions you can ask to lead a discussion.

- Most of the training guide is made up of the questions and comments that you as the trainer will be reading out loud, or saying once you get to know the material and are comfortable with it. A talking head icon (🗣️) is used to show where you will be speaking.
- Instructions to the trainer are numbered and written in ***bold italics***. You do not need to read these out loud.
- The answers to questions are provided in shaded boxes. Wait for the crew to give answers based on what they know, and then add any missing points or clarify any information if needed.

## To prepare to teach the tailgate trainings:

1. Spend about 15 minutes becoming familiar with this *Tailgate Training Guide*. Read it over and make sure you understand all the information. If necessary, read the Cal/OSHA *Heat Advisory* to review some of the key concepts.
2. Fill in the blanks in the Training Guide. Adding these details helps make sure that the safety meeting deals with actual conditions on your own job site.
3. There are three drawings you will use in the tailgate sessions. They are on pages 39–41 and you can hold them up to show the crew as you teach. Or you may want to make copies of them ahead of time.

## Tips for Trainers


Tailgate safety meetings work best if the whole crew actively participates. This makes it more interesting and more likely that people will remember the information you've provided. Here are some ways to encourage everyone to get involved:

- Ask questions instead of simply giving them all the information. After you ask a question, wait a short time to let people think. Then call on volunteers to answer. After workers have provided their answers, use the information in the answer boxes to add any points the crew missed.
- Ask about personal experience. This can help the group see how the topic is relevant to them. You could ask: Has anyone experienced any problems with heat, such as heat cramps? What happened? What did you do to recover?
- Limit the amount of time any one person can talk. If a crew member is talking too much, invite someone else to speak.
- Never make fun of anyone, or put anyone down, especially for asking questions.
- Don't fake it. If you don't know the answer to a question, don't guess or fake the answer. Write the question down and promise to get back to them.
- Stick to the topic. If the crew's questions and comments move too far from the topic, tell them that their concerns can be addressed later, either privately or in another safety meeting.

# Tailgate Training Session #1: Health Effects of Heat


(Time: 15 minutes)

## 1. Introduce the topic by saying something like this:


-  Today we are going to talk about how heat can affect you and what symptoms you should watch out for. Heat stress can often affect you before you even realize it, so it's important to be very aware of the signs.

## 2. Ask the crew these questions:

*(Wait for their answers and then use the shaded answer boxes to add any information they missed.)*

-  Just like we can't let a car engine overheat or it shuts down, we don't want our body to get too hot. Let's start by talking about heat — where does the heat come from that causes our bodies to overheat?

- hot weather
- humid weather
- sun — you absorb more heat if you are in the sun
- heat our bodies generate when we are physically active and doing hard work

-  Working outdoors, especially in hot and humid weather, being in the sun, and doing hard physical work — this pretty much describes what we do in agriculture. It's something we have to take seriously.

What are some of the signs you may notice if your body is getting too hot?

- sweating
- feeling tired or weak or dizzy
- headache
- heat rash — small red bumps on the skin



These are the early signs that you need to cool off, rest, and drink water to let your body recover. If you don't, you could develop some of the more serious effects of heat.

**3. Show the crew Diagram #1, Preventing Heat Illness, on page 40.  
Review the following points:**



Working outdoors in the fields is hard work and you will feel sweaty and tired. Workers need to drink water, take shade breaks, and rest to prevent heat problems (*point to A in the diagram*).

Then, if you feel better, you can go back to work (*point to B*), but you should still drink water frequently and take another break when you need to. If you don't feel better, talk to your supervisor right away.

**4. Show the crew Diagram #2, Health Effects of Heat, on page 41.  
Review the following points:**



This diagram will help us understand what happens when you are affected by heat.

If you are working in the heat, especially if you're not drinking enough water or taking enough breaks, you may get heat stress (*point to C*).

- You may get cramps, muscle pain, or spasms, most commonly in the arms, legs, back, or stomach.
- You could get very sweaty, have a pale face and neck, feel your pulse beating rapidly, feel very tired, or have headaches, dizziness, or nausea.
- At this point, you need medical attention. People react differently, so you may have just a few of these symptoms, or most of them.

Workers may also develop what is called heat stroke (*point to D*).

- At this point, you may no longer be sweating, and your skin may be dry, red, and hot.
- Sweating is the main way our bodies cool off — so not sweating is a very serious emergency.

- Your body temperature may be very high (over 105° F), and you are probably disoriented, confused, or even unconscious. This is a medical emergency. About half the people with heat stroke die.

There have been cases where workers have seemed fine at lunch and a couple of hours later were found having seizures or unconscious. It can happen quickly. The best way to protect ourselves is to prevent heat stress — by drinking plenty of water, taking breaks, and resting to cool off. (*Point to A on Diagram #1.*)

- On this site, we have water available at: \_\_\_\_\_
- We have shade available at: \_\_\_\_\_
- We take breaks to drink water every \_\_\_\_\_ minutes.

Diagram #1. Preventing Heat Illness

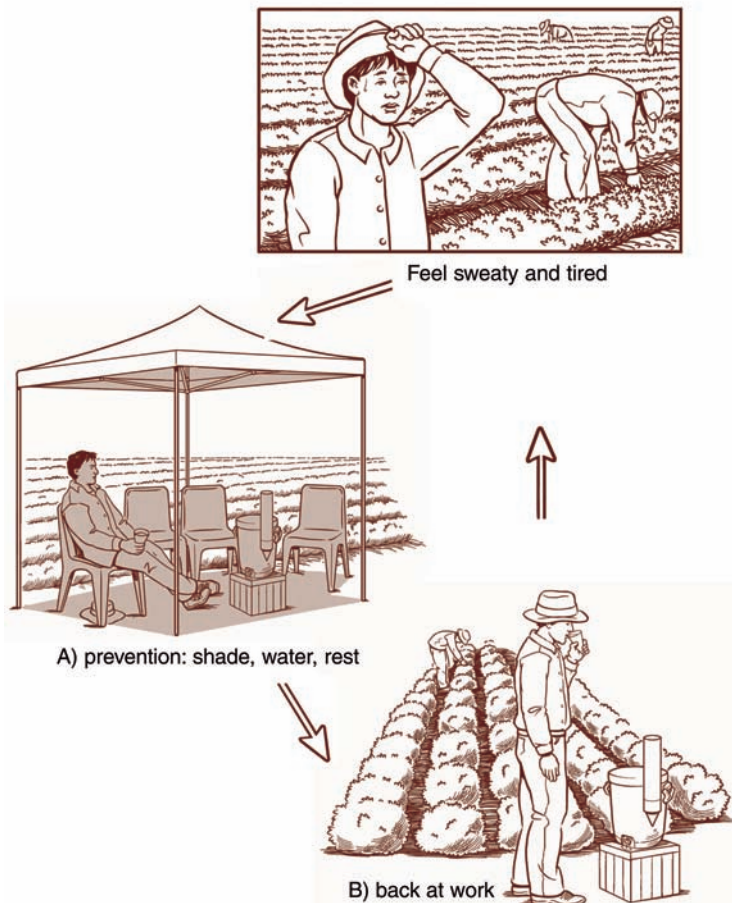
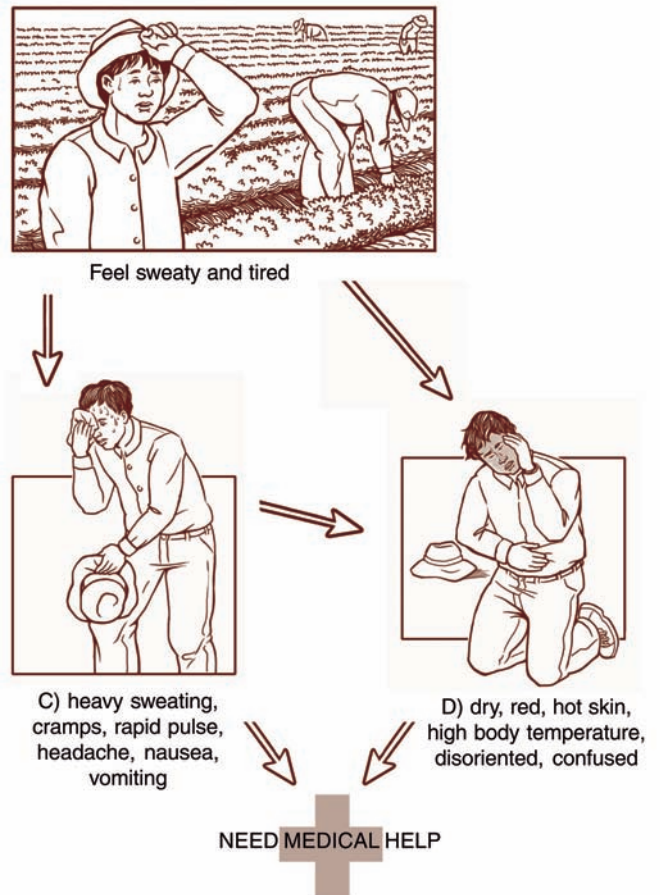


Diagram #2. Health Effects of Heat



## 5. Ask the crew these questions:

*(Wait for their answers and then use the shaded answer boxes to add any information they missed.)*



To review, what are some of the signs that you are developing heat stress?

- Skin: – normal body temperature
  - pale face and neck
  - clammy skin
  - heavy sweating
- Rapid pulse
- Muscle aches or cramps, weakness
- Headache, dizziness, or fainting
- Fatigue
- Nausea and vomiting



What are some of the signs of heat stroke?

- Skin: – high body temperature (around 105° F)
  - red, hot, dry skin
  - very little sweating
- Dizziness and confusion, unusual behavior
- Fainting
- Convulsions
- Nausea and vomiting





Heat stress can affect us all, but some people are at greater risk. What do you think would put a person at greater risk?

- You aren't used to working in heat or doing heavy work.
- You are new to working outdoors.
- You are not physically fit or are overweight.
- You drink alcohol or take drugs (illegal drugs or prescription medicine).
- You wear heavy, dark, or tight clothing, or use personal protective equipment.
- You had some early heat-related symptoms the day before.

#### **6. Add the following points:**



Not being used to working in heat is a big problem. Most of the people who died from heat stress in the past few years were in their first few days on the job or were working during a heat wave. If you haven't worked in hot weather for a week or more, your body needs time to adjust. You need to take more breaks and not do too much strenuous work during your first weeks on the job.

Some health conditions can put you at greater risk of heat stress. These include diabetes, kidney and heart problems, pregnancy, and being overweight. If you have these, it would be good to talk to your doctor about the work you do and ask whether there are any special precautions you need to take.

#### **7. To conclude, ask if anyone has questions, then close by saying:**




Next time, we are going to talk about how you should respond if you or your co-workers are feeling any of these symptoms.




# Tailgate Training Session #2: How to Respond to Symptoms (Time: 15 minutes)

## 1. Introduce the topic by saying something like this:

 Last time, we talked about the symptoms you may get if you have heat stress or the very serious condition called heat stroke. Today we are going to talk about what you should do if you or your co-workers are having these symptoms.


## 2. Ask the crew this question:

*(Wait for their answers and then use the shaded answer box to add any information they missed.)*

 Let's say there is a worker in our crew who has signs of heat stress: she is very sweaty, tired, and has a headache. What do you think you should do?

1. Notify the supervisor. She needs medical help.
2. Move the person to a cooler place to rest in the shade. Don't leave her alone.
3. Little by little, give her water.
4. Loosen her clothing.
5. Help cool the person. Fan her, put ice packs on her groin and underarms, or soak her clothing with cool water.

## 3. Add the following points:

 In this job site \_\_\_\_\_ *(fill in name)* \_\_\_\_\_ has a (phone/radio) to contact the supervisor or get medical help. Make sure you tell this person as soon as you or a co-worker have symptoms. Be prepared to describe the symptoms. This person also knows how to describe our location to the emergency personnel so they can find us quickly.

Don't wait because heat illness can quickly become more dangerous.

Be alert to unusual behavior: if your co-workers seem confused, or are sitting by themselves or walking around aimlessly, ask them if they're okay. If they seem to be acting strangely, they may have heat stroke. Contact the supervisor.

**4. For the next activity pick one of the workers to be a person who has heat stress, and explain:**

*(Make sure the crew acts out what they would do, instead of just telling you. Add any points they miss from the shaded box below.)*



Now to review how we would respond, you are going to practice what you should do if someone is having symptoms of heat stress.

Let's say you are working with \_\_\_\_\_ (*fill in name*) and you notice he is very sweaty and tired, and he looks disoriented and can't seem to concentrate on his work. Show me what you would do.

1. Notify \_\_\_\_\_ (*fill in name*) , who has a (phone/radio) to contact the supervisor.
2. \_\_\_\_\_ (*fill in name*) calls the supervisor and asks for medical help.
3. Move the person to a cooler place to rest in the shade. Stay with the person.
4. Give the person water as long as he/she is not losing consciousness or vomiting.
5. Loosen the person's clothing.
6. Help cool the person. Fan them, put ice packs on the person's groin and underarms, or soak the person's clothing with cool water.

**5. To conclude, ask if anyone has questions, then close by saying:**




Now we have learned how we would respond if someone developed heat stress, but the best strategy is always prevention. Next time, we are going to talk about how to prevent heat stress.


# Tailgate Training Session #3: Preventing Heat Illness

(Time: 15 minutes)

## 1. Introduce the topic by saying something like this:

 While heat stress is very dangerous, it is also preventable. Today we are going to review what we have learned so far and talk about what we can do to protect ourselves from heat. There is also a new law in California which requires employers to take certain steps to protect workers from heat. We'll discuss this as well.

## 2. Show the crew the drawing of Rogelio on page 39. Read the following story out loud:

 Rogelio is a new member of a crew that is picking melons in the fields. On his second day, he works hard for long periods without a break. In the early afternoon his co-worker, Julio, looks over and sees that Rogelio is sweating profusely and is acting strangely. Julio asks Rogelio what's going on, and Rogelio says he has a slight headache and feels dizzy.

Julio realizes Rogelio needs help and calls the crew leader. Together they give him water and help him sit down. Julio stays with him while the crew leader calls 911 for medical help.

Rogelio recovers, but can't work for a few days. Later, he says he had wanted to show he could work hard, and he didn't drink much water because he didn't feel thirsty.



### 3. Ask the crew these questions:

*(Wait for their answers and then use the shaded answer boxes to add any information they missed.)*



How do you know Rogelio may be suffering from heat stress?

- He is sweating, tired, has a headache, and feels dizzy.



What went well in this case to address heat stress?

- Julio called the crew leader.
- They gave Rogelio water.
- They called 911.
- They helped him sit down to rest.
- Julio was watching out for his co-worker. He stayed with Rogelio while the crew leader made the call.



What went wrong?

- Rogelio wasn't used to working in the heat. He should have had less intense work until he got used to working in the heat.
- They had not made sure Rogelio got adequate breaks.
- Rogelio hadn't drunk water. You shouldn't wait until you are thirsty to drink.
- They didn't take Rogelio to shade.
- Rogelio wanted to prove he could work hard — he didn't report symptoms as soon as he felt them.



So what can we learn from this — what are the important steps to prevent heat stress?

- Drink plenty of water.
- Take breaks in the shade.
- “Easy does it” on your first days of work in the heat.
- If you’re not feeling well, report this to your supervisor immediately.
- Watch out for your co-workers.
- Wear loose, lightweight cotton clothes, a long-sleeved shirt, long pants, and a wide-brimmed hat.

#### **4. Add the following points:**



Each person should drink at least one quart (one liter or 4 cups) of water per hour.

- It’s better to drink small amounts frequently, as opposed to larger amounts less often.
- Drink even if you don’t feel thirsty.
- Avoid drinks like sodas or coffee that have caffeine, or alcoholic drinks — these drinks dehydrate you and can make it more dangerous to work in the heat. Also avoid sports drinks as these contain too much sugar.
- People worry that if they drink a lot of water, they’ll have to go to the bathroom more often. In fact, you’ll mostly sweat it off.
- When you’re not at work, still drink plenty of water to help your body recover from the work day.

Whenever you feel you need to take a break to recover from heat, you have the right to take a break of at least 5 minutes in the shade. This “recovery period” is allowed under the new California law. This is in addition to the regularly scheduled breaks for meals and rest. Regular breaks are at least 10 minutes (paid) for every 4 hours of work, and a 30-minute meal break (unpaid) if you work at least 6 hours.

During a heat wave, take more frequent breaks.

Pair off and watch your co-worker for signs of heat stress. Remind your buddy to drink water or take a break. Talk to your buddy during the work shift to make sure everything is okay. Sometimes people with heat stress get disoriented and think they are okay. If you suspect a problem, keep checking on your co-worker or tell a supervisor.

Sometimes people say they are more protected by dark-colored, heavier clothing. This will only make you hotter. Wear light-colored lightweight cotton clothing.

### **5. Explain to the crew:**



There are also ways to prevent heat stress that have to do with how the work is done. At our site we will: *(check those that apply to your site)*

- Schedule our work to do the more strenuous tasks during cooler times of the day.
- Start work earlier and end earlier.
- Reduce the pace of the machinery.
- Reduce or suspend production quotas.
- Add more scheduled breaks.
- Other: \_\_\_\_\_

### **6. Ask the crew this question:**



What other suggestions do you have for what we can do on this job site to prevent heat stress?

*(Give the crew a few minutes to come up with suggestions. Make a plan for implementing good ideas.)*



**7. To conclude, ask if anyone has questions, then tell the crew:**



The new law says employers are required to provide plenty of cool water that is readily available, and a place to rest in the shade when workers request a break to recover from the heat. Workers must also receive training about heat stress and what to do in an emergency.

We are providing water (*describe where*): \_\_\_\_\_

\_\_\_\_\_

We are providing shade (*describe where*): \_\_\_\_\_

\_\_\_\_\_

If you or your co-workers have symptoms, let \_\_\_\_\_ know right away (*fill in name of person with phone or radio who knows how to contact emergency personnel*) .

During heat waves, we take the following extra precautions: (*fill in examples*)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

We need you to drink water, take breaks when you need them, and watch out for each other. Let us know right away if you think there's a problem!



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# Additional Resources

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# For Information and Help

## **Worker Occupational Safety and Health (WOSH) Resource Centers**

With support from the Commission on Health and Safety and Workers' Compensation (CHSWC), two Resource Centers have been created, one in Northern and one in Southern California. The Resource Centers provide:

- Written materials including factsheets, books, and reports
- Technical assistance
- Research assistance
- Referrals to state and local health and safety agencies
- A guide to multilingual health and safety training materials, which is also available online at: [www.dir.ca.gov/chswc/MultilingualGuide/MultilingualGuideMain.htm](http://www.dir.ca.gov/chswc/MultilingualGuide/MultilingualGuideMain.htm)

### **Northern California Resource Center**

Labor Occupational Health Program

University of California, Berkeley

2223 Fulton Street, 4th Floor

Berkeley, CA 94720-5120

(510) 643-4335

[andrews2@berkeley.edu](mailto:andrews2@berkeley.edu)

[www.lohp.org](http://www.lohp.org)

(For assistance in Spanish, please call Valeria Velazquez, (510) 643-2090.)

### **Southern California Resource Center**

Labor Occupational Safety and Health Program

University of California, Los Angeles

10945 LeConte Avenue

Box 951478

Los Angeles, CA 90095-1478

(310) 794-5964

[dcorn@ucla.edu](mailto:dcorn@ucla.edu)

[www.losh.ucla.edu](http://www.losh.ucla.edu)

(For assistance in Spanish, please call Jessica Martinez, (310) 794-5971.)

CHSWC also maintains a website with resources and materials. Visit them at:

[www.dir.ca.gov/chswc](http://www.dir.ca.gov/chswc)

## **Cal/OSHA**

Workers in California are protected by Cal/OSHA health and safety regulations (called “standards”) regardless of their immigration status.

Cal/OSHA, housed in the Department of Industrial Relations, enforces these regulations, responds to complaints and reports of accidents, and inspects workplaces. Cal/OSHA’s Consultation Service provides technical assistance on health and safety problems to employers and employees.

### **Cal/OSHA Compliance — Headquarters**

1515 Clay St., Suite 1901

Oakland, CA 94612

(510) 286-7000

*[www.dir.ca.gov/dosh/](http://www.dir.ca.gov/dosh/)*

### **Cal/OSHA Consultation Service — Toll-Free Information Line**

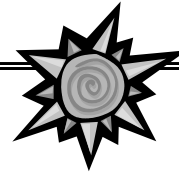
(800) 963-9424

*[www.dir.ca.gov/dosh/](http://www.dir.ca.gov/dosh/)*

For Cal/OSHA materials on heat illness, go to:

*[www.dir.ca.gov/dosh/HeatIllnessInfo.html](http://www.dir.ca.gov/dosh/HeatIllnessInfo.html)*

# CAL/OSHA HEAT ADVISORY



When employees work in hot conditions, employers must take special precautions in order to prevent heat illness. Heat illness can progress to heat stroke and be fatal, especially when emergency treatment is delayed. An effective approach to heat illness is vital to protecting the lives of California workers.

Employers of outdoor workers must comply with the new permanent heat illness prevention standard. This standard requires employers to take four simple steps that include shade, water, training and written procedures. These can greatly reduce the risk of outdoor workers developing heat illness.

Heat illness results from a combination of factors including environmental temperature and humidity, direct radiant heat from the sun or other sources, air speed, and workload. Personal factors, such as age, weight, level of fitness, medical condition, use of medications and alcohol, and acclimatization affect how well the body deals with excess heat.

## Heat Illness Risk Reduction

### 1. Recognize the Hazard.

There is no absolute cut-off below which work in heat is not a risk. With heavy work at high relative humidity or if workers are wearing protective clothing, even work at 70°F can present a risk. In the relative humidity levels often found in hot areas of California (20 to 40 percent) employers need to take some actions to effectively reduce heat illness risk when temperatures approach 80°F. At temperatures above 90°F, especially with heavy work, heat risk reduction needs to be a major concern. **It is especially important to be vigilant during periods of abnormally high heat.**

### 2. Water.

There must be an adequate supply of clean, cool, potable water. Employees who are working in the heat need to drink 4 eight-ounce glasses of water per hour, including at the start of the shift, in order to replace the water lost to sweat. For an eight-hour day this means employers must provide two or more gallons per person. Many people can be very dehydrated and not feel thirsty at all. Employees need ongoing encouragement to consume adequate water.

### 3. Shade and Rest Breaks.

Employers are required to provide shade for recovery periods when employees need relief from the heat. The direct heat of the sun can add as much as 15 degrees to the heat index. Heat illness occurs due to a combination of environmental and internal heat that cannot be adequately dissipated. Rest breaks are important to provide time for cooling and provide an opportunity to drink water. Breaks should be taken in cooler, shaded areas. Wide brimmed hats can also decrease the impact of direct heat.

### 4. Acclimatization.

People need time for their bodies to adjust to working in heat. This “acclimatization” is particularly important for employees (1) returning to work after a prolonged absence or recent illness, (2) recently moving from a cool to a hot climate, or (3) working during the beginning stages of a heat wave. For heavy work under extremely hot conditions, a period of 4 to 10 days of progressively increasing work time starting with about 2 hours work per day, though not required, is recommended. Also recommended, for less severe conditions at least the first 2 or 3 days of work in the heat should be limited to 2 to 4 hours. Monitor employees closely for signs and symptoms of heat illness, particularly when they have not been working in heat for the last few days or when a heat wave occurs.

### 5. Prompt Medical Attention.

Recognizing the symptoms of heat illness and providing an effective response requires promptly acting on early warning signs. Common early symptoms and signs of heat illness include headache, muscle cramps, and unusual fatigue. However, progression to more serious illness can be rapid and can include unusual behavior, nausea/vomiting, weakness, rapid pulse excessive sweating or hot dry skin, seizures, and fainting or loss of consciousness. **Any of these symptoms require immediate attention.**

Even early symptoms may indicate serious heat exposure. If first aid trained personnel are not immediately available on-site to make an assessment and workers show any abnormal response to the heat, you should call 911 immediately. Regardless of the worker’s protests, no employee with any of the symptoms of possible serious heat illness noted above should be sent home or left unattended without medical assessment and authorization.

### 6. Training.

Supervisors and employees must be trained in the risks of heat illness and the proper measures to protect themselves and their co-workers. Training should include:

1. Why it is important to prevent heat illness
2. Procedures for acclimatization
3. The need to drink water frequently
4. The need to take breaks out of the heat
5. How to recognize the symptoms of heat illness
6. How to contact emergency services and how to effectively report the work location to 911
7. The importance of choosing water instead of soda or other caffeinated beverages and avoiding alcoholic beverages all together during high heat.

### 7. Written Procedures

Employers are required to put their heat illness prevention procedures, including employee training in writing. It is recommended this document be incorporated into the employers Injury and Illness Prevention Plan. Other recommended procedures include account for all your workers during and at the end of the work shift. Check the heat index prior to starting work each day. If the temperatures are high, consider beginning and ending your shifts early. If possible, work should be performed in the shade.

08/01/2006



Drink water frequently.  
Avoid soda, alcohol and coffee.





## Daily Checklist

### Use before each work day

*(Make copies of these sheets so you have one for each work day.)*

Date: \_\_\_\_\_

#### Access to water:

- There is enough fresh, cool drinking water for each employee to drink at least one quart per hour (this equals one liter per hour or 4 cups per hour). It is located where all workers will have ready access. Single-use cups are provided.

#### Shade:

- There is shade available for breaks and if employees need to recover (umbrella, canopy, other portable structure).

#### Acclimatization: (During heat wave, check for all workers.)

- Any employees who haven't been working more than two weeks in the heat, or who had symptoms the previous day, have been identified and given accommodations in work load or schedule.

#### Worker reminders:

- Workers have been reminded and encouraged to:
  - take breaks in shade and where it is
  - rest for at least 5 minutes if they feel they need to, and to not wait until they feel sick to take a rest
  - drink water each hour and know where to find it
  - look out for one another and report any signs or symptoms to their crew leader.

#### Emergency preparedness:

- Someone in the field has a telephone or radio and knows who to contact in case of an emergency and how to describe our exact location. Today this is: \_\_\_\_\_

## Daily Checklist

### Use before each work day

*(Make copies of these sheets so you have one for each work day.)*

Date: \_\_\_\_\_

#### Access to water:

- There is enough fresh, cool drinking water for each employee to drink at least one quart per hour (this equals one liter per hour or 4 cups per hour). It is located where all workers will have ready access. Single-use cups are provided.

#### Shade:

- There is shade available for breaks and if employees need to recover (umbrella, canopy, other portable structure).

#### Acclimatization: (During heat wave, check for all workers.)

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  - take breaks in shade and where it is
  - rest for at least 5 minutes if they feel they need to, and to not wait until they feel sick to take a rest
  - drink water each hour and know where to find it
  - look out for one another and report any signs or symptoms to their crew leader.

#### Emergency preparedness:

- Someone in the field has a telephone or radio and knows who to contact in case of an emergency and how to describe our exact location. Today this is: \_\_\_\_\_



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# Heat Hazards Safety Checklist

—Use this checklist to inspect the worksite and think about heat hazards before the training is held—

Date prepared: \_\_\_\_\_ By: \_\_\_\_\_

Work location: \_\_\_\_\_

*Check the box if the statement is true. If there are statements that are not true, or you are not sure, talk with your employer.*

## Written Procedures

- The company has written procedures that address heat hazards, prevention and the response to heat illness if it occurs. (This may be in the Injury and Illness Prevention Program (IIPP).)

## Work Practices

- There is a plan to allow for *acclimatization*, that is, allowing workers to adjust to physical activity in hot weather. For instance, workers could be given lighter work or more frequent shade breaks during their first two weeks on the job and during a heat wave.

- At this job site, our plan for acclimatization is:

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- Employees take their breaks in the shade, and there is shade available for any employees who want to cool off or who think they need to recover from the effects of heat. Adequate shade is an area that is open to the air or cooled, where the worker can rest comfortably and safely (for example, an umbrella, canopy, or other portable structure).
- There is plenty of cool drinking water and single-use cups in locations where workers have ready access to it at all times.

There are workers identified in the field who know whom to contact in an emergency and how to provide instructions to emergency responders so the worksite can be easily located. These workers have means of communication available (cell phone, radio, etc.).

These workers are:

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First aid supplies and equipment are available. These can include: ice packs, cloths to wet down a person, and fans.

Location: \_\_\_\_\_

Hot, strenuous jobs are rotated, so workers are also able to carry out less strenuous tasks or work in cooler areas.

Strenuous work is done during cooler parts of the day (early mornings or evenings).

Workers have been trained to use the buddy system to recognize signs of heat illness in each other.

Workers are encouraged to wear loose-fitting, light-colored clothing with long sleeves, long pants, and a wide-brimmed hat.

Workers are encouraged to take frequent breaks (of at least 5 minutes), to drink water, and are encouraged to report possible symptoms of heat illness in themselves or their co-workers.

Workers, such as pesticide handlers, who wear protective equipment, are given frequent breaks and proper training on the use of this equipment.

During a heat wave, workers are reminded to drink water frequently and rest in the shade.

The crew leader checks each day to make sure all appropriate precautions are in place. (See Daily Checklist on page 31.)

## Training

- The supervisor or crew leader has received the required training on heat hazards, prevention, and company procedures. He or she also knows how and when to contact emergency responders.
  
- Workers are being trained on the following:
  - Common signs and symptoms of heat illness
  - Risk factors that may make it more likely for workers to develop heat illness
  - Proper precautions to prevent heat illness and specifically the steps taken at this workplace
  - The importance of acclimatization
  - The importance of drinking water frequently
  - Steps to take if someone is having symptoms
  - Proper use of protective clothing and equipment
  - Emergency contact information and procedures.



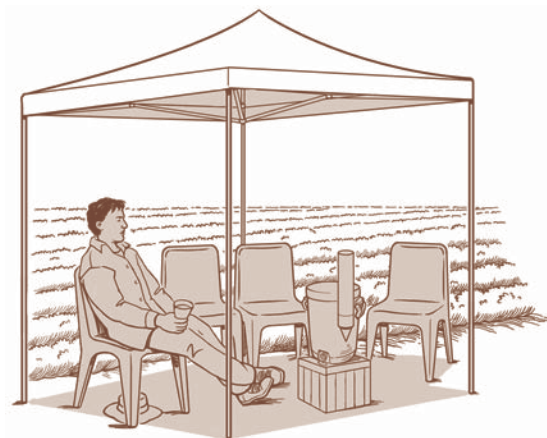


# Heat Kills

Many farmworkers have died or suffered serious health problems because of heat. This can be prevented!

To prevent heat problems:

- **Drink water**—it's best to drink 3 cones of water (about a cup) every 15 minutes while working.
- **Take advantage of your break**—it's best to rest in the shade.
- **Wear light-weight, light-colored cotton clothing.** Wear a wide-brimmed hat or a cap with bandanas.
- **Watch for early symptoms** in yourself and your co-workers. If you have any symptoms, tell your supervisor immediately because you need a medical evaluation.



Common symptoms:

- heavy sweating
- cramps
- headache
- disorientation or dizziness
- high pulse rate
- nausea and vomiting.



The following symptoms of heat stroke are very serious and should be considered an emergency:

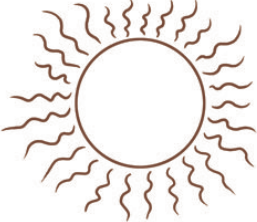


- high body temperature
- red, hot, dry skin
- very little sweating
- dizziness, confusion, convulsions.





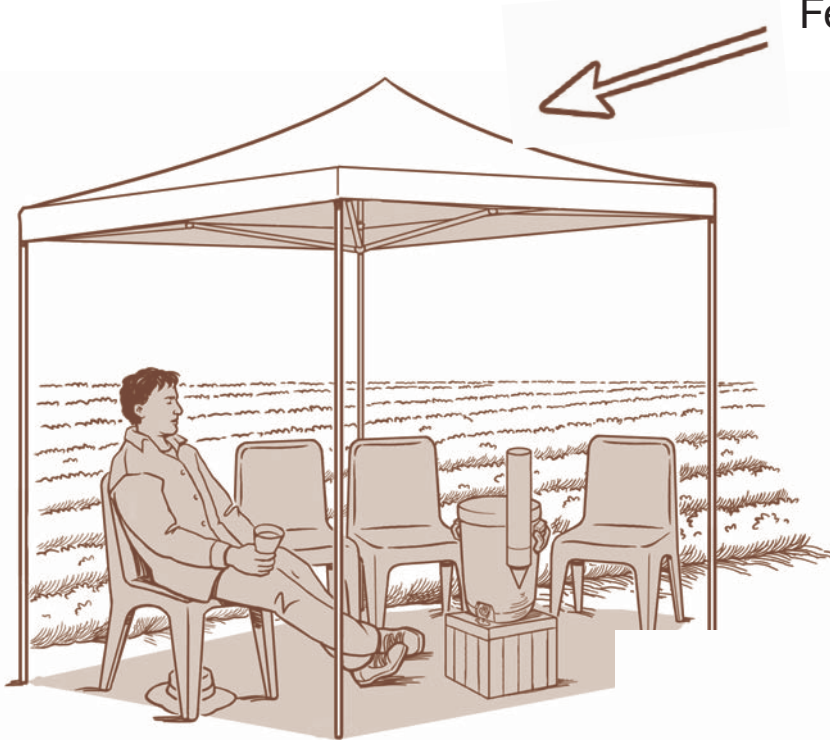
# Rogelio's Story



# Diagram #1. Preventing Heat Illness



Feel sweaty and tired



A) prevention: shade, water.



B) back at work

# Diagram #2. Health Effects of Heat



Feel sweaty and tired



C) heavy sweating, cramps, rapid pulse, headache, nausea, vomiting



D) dry, red, hot skin, high body temperature, disoriented, confused

NEED MEDICAL HELP

